

Abstract of the Disclosure

A stimulator and a method for electrical stimulation of bone to promote osteogenesis is disclosed in which surface electrodes positioned around an incision site transmit an

- 5 interferential current that has a base medium frequency alternating current between 1K-
20KHz. A digital signal processor generates a sine-wave-like waveform from a pulse
generator which after further processing is used to generate two circuits for use in producing
the interferential current. The effective area of stimulation is controlled by placement of
electrodes and electrode orientation. Amplitude modulation of electrical circuits created at
10 the electrode placements also augments the effective area of stimulation.